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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Jochen Antkowiak

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EXAMINER

DEPPE, BETSY LEE

ART UNIT

PAPER NUMBER

2611

DATE MAILED: 08/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/914,403

Applicant(s)

ANTKOWIAK ET AL.

Examiner

Betsy L. Deppe

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2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 9,10 and 12-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9,10 and 12-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 February 2006 is/are: a) ☒ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments, see page 11, filed February 21, 2006, with respect to claims 9 and 15 have been fully considered and are persuasive. The rejection of August 9, 2005 has been withdrawn.

### *Drawings*

2. The drawings were received on February 21, 2006. These drawings are acceptable.

3. The drawings are objected to because the component for "centrally comparing the source signals to a quality measure . . . wherein the quality measure is demanded by a selecting user" as recited in the claims 9 and 15 must be shown or the feature(s) canceled from the claim(s). Although newly added Figure 3 corresponds to the method claims, Figure 2 does not show a component for performing the "centrally comparing" step recited in the respective independent claims. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

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changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

4. The amendment to page 5, lines 20-21 is inconsistent with the amendment filed May 23, 2005. Based on the May 23, 2005 amendment, the specification reads as follows on page 5, lines 20-21:

"If the corresponding formats are known in the control device R, then a table may also be used.

The improved signals are then processed by a multiplexer 26 to obtain the output signals 27."

However, the amendment of February 21, 2006 does not include the second sentence before adding a new paragraph describing Figure 3. It is unclear if the applicants intended to delete this sentence. Appropriate clarification is required.

### ***Claim Objections***

5. The claims are objected to because of the following informalities:

- a. in claim 9, line 8 and claim 15, line 16, "determine inferior quality" should be "determine **source signals of** inferior quality" for clarification;

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- b. in claim 13, line 1, "the performing" should be "performing"; and
- c. in claim 15, line 11, the Examiner suggests changing "the station" to "the **central communications network** station" in order to be consistent with claim 15, line 4.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 9, 10 and 12-18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

9. In claims 9, 15 and 18, it is unclear how to perform signal improvement on inferior quality signals with respect to the **data format** in combination with the "performing analysis" step in the respective claims. According to the detailed description, the data format is converted if the input format differs from the desired format thereby corresponding to the "performing analysis" step in the respective claims.

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However, the specification does not describe any additional processing with respect to data format which may be interpreted to correspond to "performing signal improvement on inferior quality signals with respect to the data format." For example, how is the data format of "source signals determined to be of inferior quality" further changed after the "performing analysis" step. Therefore, one of ordinary skill in the art is unable to make and/or use the invention.

10. The dependent claims are rejected under the same ground(s) as the respective independent claims.

11. Claims 9, 10 and 12-17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

12. With regard to claims 9, 15 and 18, it is unclear what is meant "centrally comparing the source signals to a quality measure" (emphasis added) as recited in claim 9, lines 6-8; claim 15, lines 12-14; and claim 18, lines 7-8. For example, how does "centrally comparing" the source signals differ from "non-centrally comparing" the source signals?

13. With regard to claims 9 and 15 (and their respective dependent claims), it is unclear what is meant by "source signals determined to be of inferior quality" in claim 9, line 9 and claim 15, lines 17-18. The term "inferior quality" is a relative term which renders the claim indefinite. The term "inferior quality" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the

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invention. For example, must the signal include a prescribed number of errors before it is deemed to be of "inferior quality"? Or is the signal below a particular signal level in order to qualify as an "inferior quality signal"? Since the specification does not provide any details of the "quality measure" used in the comparison step, it is unclear what constitutes a signal that is of inferior quality based on the quality measure such that one of ordinary skill in the art would be reasonably apprised of the scope of the invention.

14. In claim 9, lines 9-10 and claim 15, lines 18-20, it is unclear whether the signal improvement is performed based on "the data format and errors of the source signals" or whether the source signals is determined to be of inferior quality based on "the data format and errors of the source signals."

15. In claim 10, it is unclear how the steps on lines 6-10 relate to each other and the other steps related in claims 9 and 10. For example, is the format conversion step in claim 10, lines 6-7 performed on the demultiplexed signals of claim 10, line 2 and/or the source signals of claim 9, line 3? Furthermore, in claim 10, line 10, are the original demultiplexed signals multiplexed or are the demultiplexed signals processed before being multiplexed?

16. With regard to claims 9, 15 and 18, "if necessary" in claim 9, line 4; claim 15, line 12; and claim 18, lines 5-6 renders the respective claims vague and indefinite since it is unclear what condition(s) must exist before the data format of the source signals are converted.

17. In claim 10, line 8, it is unclear whether "signals" are referring to the source signals (see claim 9, line 4), source signals determined to be of inferior quality (see claim 9, lines 9-10) or the demultiplexed signals (see claim 10, line 2).

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18. In claim 15, it is unclear what is meant by “a control device for at least one of signal selection and processing.” How does the control device relate to “signal selection and processing”?

19. With regard to claim 17, it is unclear which claim should be further limited by claim 17 since claim 17 refers to “the device of claim 9” (emphasis added) and claim 9 is method claim.

20. With regard to claim 18, the term “inferior quality” on line 11 is a relative term which renders the claim indefinite. The term “inferior quality” is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is unclear what type of signal constitutes an “inferior quality signal.” For example, must the signal include a prescribed number of errors before it is deemed to be of “inferior quality”? Or is the signal below a particular signal level in order to qualify as an “inferior quality signal”? Since the specification does not provide any details of the “quality measure” used in the comparison step, it is unclear what constitutes a signal that is of inferior quality based on the quality measure such that one of ordinary skill in the art would be reasonably apprised of the scope of the invention.

21. The dependent claims are rejected on the same grounds as the respective independent claims.




***Conclusion***

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betsy L. Deppe whose telephone number is (571) 272-3054. The examiner can normally be reached on Monday, Tuesday and Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

23. Please note that this application is now assigned to Art Unit 2611.

  
Betsy L. Deppe  
Primary Examiner  
Art Unit 2611